edifices had already been published, and feeling that it was the more practical kind of details which the architect principally needed. This determination was creditable to him, for he was possessed of no small skill as an artist, and it must have been a struggle to him at times to act up fully to his resolution: not that he neglected perspective drawing, but that he knew the greater importance of severe outlines.

In conjunction with Mr. Sylvester, the engineer, he was engaged in erecting several works, in which the principles of atmospheric heat and ventilation required particular study: of these the flax mills at Patrington, near Hull, may be mentioned, and some conservatories in Cumberland and Derbyshire. Amongst other buildings, he erected a mansion in Hyde-park and two in Westbourne-terrace, a villa for Herbert Evans, Esq., Hampstead, and a cottage for Mr. Benj. Marshall, at Muswell-hill: at the period of his decease he was occupied on some extensive buildings in Scotland. The restoration of the chancel of Beddington Church, the national schools at Beddington, Kilburn, and West-End, Hampstead, are also amongst his works.

Mr. Charles Geoghegan exhibited a rubbing from the frieze of an Elizabethan mantel-piece, discovered lately during the alterations to Wiarton House, near Staplehurst, Kent. In the original, which is elegantly executed in the Kentish rag stone, the pattern is very slightly incised in the stone, perhaps 1-50th of an inch, and it is a question if the same has not been traced out by means of an acid, this practice having been formerly much resorted to by the local masons.

Mr. Sydney Smirke, V. P., then read a paper, "On the contents of a work by Sir Balthazar Gerbier, written in the 17th century, and entitled 'Counsel and Advice to all Builders,' together with some remarks suggested thereby."

These remarks referred to the condition of artizans now and at that period, and considering that they are calculated to be useful as shewing a progressive improvement in the condition of the working man, we give them prominence, and invite our readers of the class in question to a calm consideration of the facts set forth. To the other part of Mr. Smirke's paper we shall refer hereafter.

The Chairman said that, although this work of Gerbier's was undoubtedly one of the earliest works on the subject in our language, it was not the first. Walpole mentions a treatise by John Shute, a copy of which had recently been recovered by Professor Willis.*

Mr. Taylor, jun., then described his patent method of facing walls with stone, illustrated in our pages last week. Mr. Fowler mentioned, in connection with the subject, that the tower of Chelsea new church was cased after the brickwork of it was finished, and that the masons began at the top and worked downwards. Projecting courses had been worked in.

ON THE CONDITION OF WORKMEN NOW AND IN EARLY TIMES.

A PERUSAL of the little book written by Sir Balthazar Gerbier, in the seventeenth century, entitled "Counsel and Advice to all Builders," leads me to offer a few observations of a statistical nature, suggested by some data which the treatise affords, concerning the price of labour and materials in the latter half of the seventeenth century. Many, indeed most of the prices are stated in the book so loosely as not to admit of any safe comparison with the prices for the like work at the present day. Let me, however, take a few of Sir Balthazar's prices,—such as do admit of exact comparison, and let me place beside them what may be fairly considered as the present fair average price of the same works:—

	Present price.
Bricks, per thousand, 16s. 8d.	38s.
A rod of reduced brickwork, 5l.	13l.
Brickwork, labour, and mortar only, including arches, 33s. per rod	78s.
Chalk lime, 6d. per bushel	6½d.
Lath and plaster, set, from 14d. to 17d. per yard	21d.
Render, set, 3d. to 4d.	6d.
Lathing only, 6d.	9½d.
Iron-bars, hinges, bolts, staples, hooks, &c., 1½d. per lb.	5d. to 6d.
Lead gutters, 20s. per cwt.	22s.
Solder, 9d. to 10d. per lb.	6d. to 9d.

It is apparent, from the above comparison, that the prices of those works of which the value is composed of labour rather than of material were low as compared with present prices, whilst those prices are comparatively high of which labour forms a less important element. Sir Balthazar, unfortunately, does not give us the wages of workmen in his day; but the researches of Mr. Macaulay, in his recently published history, supply ample evidence on this subject. He shows that the ordinary pay of a skilled workman was 6s. to 7s. per week, whilst the ordinary pay of a labourer was 4s. per week. Compare these with the present wages of workmen, and we shall find that they receive more than *four* times as much as they did at the period in question.

Having thus shown how low the scale of workmen's wages was in those "good old days," let us inquire into the necessary expenses of a workman. On referring to the table given by Adam Smith of the prices of wheat, it will be seen that the average price, from the year 1637 to 1700 inclusive, was 51s. per quarter: the fluctuation was enormous, for in 1648 it was 85s., and only a year afterwards it was 35s. 6d.,—but the average was 51s. But what is the present price? About 49s.—extraordinarily low at the present moment, I am aware, but the average of the last eight years is little more than 54s.

It is therefore plain that during the Commonwealth, and subsequently, a workman must have paid about as much for his bread as he now pays, whilst he received rather less than one quarter of his present wages.

I have no data at hand as to the price of meat, but Mr. Macaulay reminds us that hundreds of thousands of families rarely, or never, touched it, and it probably did not then form an article of ordinary consumption among the working classes; indeed, the risk and expense of bringing cattle to the London market in those days, would alone justify the presumption that meat was a comparatively high-priced luxury. Mr. Macaulay has also ascertained that the prices of the following articles in 1685 were not merely relatively, but actually, higher than in 1848:—viz., sugar, salt, coals, candles, soap, shoes, stockings, and, generally, all articles of bedding and clothing. Then, as now, these commodities comprised nearly all the personal comforts of a labouring man.

If we even look back to so recent a period as the year 1800, I have it on excellent living testimony, that the wages of a good mason in London were only 16s. per week, who now receives from 30s. to 33s. In the year 1800, wheat was, on an average of five years, as appears by the tables given in Tooke's History of Prices, 90s. 6d. per quarter; and, indeed, during a year of great scarcity about that period, the quartern loaf, for which we now pay 7d. or 8d., cost 1s. 10d.*

It is, indeed, most gratifying to trace the real and progressive improvement in the condition of the working man, since times to which many are too apt to look back with a vague feeling of regret,—as if the keener competition of later times had reduced both the means of employment and the reward of labour. It seems, however, to be a law of our nature that, with the growth of all the material gratifications of life, there grows up also (and in a still greater degree) an increased wish to obtain a larger share of them; and hence it is that contentment is not found to keep pace with improvement.

I trust that my motives in making this contrast will not be misunderstood. I am anxious to shew to workmen that they have at least some grounds for satisfaction, but I am very far indeed from *regretting* their present wages. *We*, as architects, are too deeply interested in their welfare to admit of such a supposition. Our fortunes are bound up with theirs; upon their fidelity and care our professional character and credit depend. Nor can we expect them to use their energies with the same zeal and assiduity, whether we pay them with a grudging or a liberal hand. If ever it could be said with truth that a workman is worthy of his hire, it can be said now of English workmen. In all the most important arts of manufacture, machinery, and architectural construction, English workmanship is without a rival. I appeal to those architects who have examined the present state of the art of building on the continent, to testify the perfect truth of this assertion.

If, in our solicitude for the welfare of this very intelligent, sober, industrious, and loyal class of men, we look around for the means of further advancement, we must turn to those causes over which we can reasonably expect to exercise some control.

The *rate* of wages is everywhere determined by causes which it is useless to attempt to influence; nor have we any reasonable prospect of removing the mischief arising from uncertainty of employment, or from the fluctuations in prosperity or fashion. But the further reduction of the cost of all the necessaries and comforts of life, is an object clearly within the sphere of our competency. That is the quarter from which we may, with reasonable confidence, anticipate an amelioration of the labourer's lot.

Among the articles of primary necessity is that of *lodging*; and it is unfortunately one in which the condition of working people cannot be shown to have experienced much, if any, improvement. Both in this and other countries this head of expense is one which for very many years past has been found to have comparatively little tendency to decrease. In many parts it has nominally increased in a great degree.

About fourteen years ago I ventured to put in print a few suggestions for cheapening and improving the dwellings of the labouring classes. The ground I then broke was, to the best of my belief, a perfectly virgin soil: many have since entered on the same field, and much has been done; companies have been formed; many plans in various parts of the country laid down, and in part carried out, for providing cheap, healthy, and commodious dwellings. The idea, therefore, has struck root, and I trust it may continue to flourish and bear good fruit. I will now, in closing my remarks, quote the words of one of the ablest of French statesmen, M. Thiers, in reference to the defective condition of workmen as regards their dwellings—words which are certainly remarkable when coming from such a quarter. In a speech recently pronounced by him, he says:—"Il y a, je le répète, possibilité de loger les ouvriers dans les grandes villes à meilleur marché d'une maniere plus saine. Cherchez avec nous les moyens d'y arriver; mais il faut les chercher en hommes qui aiment le peuple et qui veulent faire son bonheur."

SYDNEY SMIRKE.

IMPROVEMENTS IN SHAPING METALS.—Mr. John Frearson, of Birmingham, has obtained a patent for improvements in bending or shaping. The metal as supplied hot from the rollers, is drawn by tongs with a to and fro and closing and opening motion between a pair of cutters, and slantwise, across a mandril or die. The requisite length is cut off, and then drawn by the mandril between a pair of grooved rollers, supported in levers side by side. As the iron is drawn through, the rollers approach by cams acting on the free ends of the levers, bending it completely round the mandril. The link, when completed, is removed by the mandril being made to slide back, and by the forward action of a catch interposed between the link and sliding-plate in which the mandril is supported. The different parts are worked from the main shaft by an arrangement of cams and levers far too complicated to be described without diagrams.

* John Shute was buried in the old church of St. Edmund, Lombard-street. His book was called "The First and Chief Grounds of Architecture:" he died Sept. 23, 1563. According to Stowe, his epitaph commenced as follows:—

"This monument declares, that here the corps doe lye
Of him that wrought in science right to publish prudently,
Among the rest of things, the which he put in ure,
That ancient practice and profound, that highst of architecture.
A knowledge meet for those that buildings doe erect,
As he his workes, at large set forth, in shewne the full effect."—ED.

* Some interesting facts, tending to shew the improved condition of workmen within the last fifty years, are noticed by M. Thiers, in his "Discours sur le droit au travail," pronounced 13th September last.

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